

Listing of Claims

1. (Currently Amended) A call pick-up system of a switching device, comprising:

a digit analysis circuit which determines whether dialed digits from a call pick-up subscriber match a call pick-up feature code, the digit analysis circuit determining the match when a call to subscribers belonging to a same call pick-up is received;

a ring search circuit which searches states of telephones of the subscribers in response to said match; ~~a subscriber call process block for performing a call pick-up function in the switching device;~~

~~a caller information analysis circuit block, included in the subscriber call process block,~~ for analyzing caller information received from the search and providing the analyzed information to ~~[[a]]~~ the call pick-up subscriber, wherein the ~~analyzed information includes~~ the caller information analysis circuit generates a caller information table having a plurality of unique identifiers for identifying a respective plurality of callers; and

a display control ~~block~~ circuit which controls a display of a call pick-up subscriber telephone, wherein the display control block outputs information from the caller identification table formed by the caller information analysis ~~circuit block~~ to the call pick-up subscriber display.

2. (Currently Amended) The system of claim 1, wherein the caller information analysis ~~circuit block~~:

generates a message requesting the caller information,
sends the message to one or more of the ringed subscribers,
receives a response message from each of the ringed subscribers,
analyzes the caller information included in the response messages, and
builds ~~[[a]]~~ the caller information table using the analyzed caller information and telephone numbers of ~~each~~ the ringed subscribers.

3-9 (Canceled)

10. (Currently Amended) A call pick-up ~~[[The]]~~ method, ~~of claim 8, wherein executing the call pick-up comprises:~~ comprising:

analyzing dialed digits by ~~[[the]]~~ a call pick-up subscriber and determining whether the dialed digits match a call pick-up feature code;

searching for ~~[[the]]~~ ringed subscribers belonging to ~~[[the]]~~ a same call pick-up group and transmitting ~~[[the]]~~ a caller information request message to each ~~identified of the~~ ringed subscribers;

receiving ~~[[a]]~~ response messages including the caller information from the ringed subscribers, analyzing the received caller information, and building a caller information table;

notifying the call pick-up subscriber of the caller information by using the caller information table, which includes the caller information of the ringed subscribers;

analyzing ~~[[the]]~~ additional dialed digits by the call pick-up subscriber corresponding to information in the caller information table, determining whether the additional dialed digits match a specific caller selection code, and notifying at least one or more of the ringed subscribers of the existence of the call pick-up subscriber;

receiving a response message from the at least one ringed subscriber ~~and transmitting the response message to the call pick-up subscriber~~; and

receiving a call pick-up notice message from the call pick-up subscriber, transmitting the message to ~~[[the]]~~ a specific caller, and receiving a response message~~[[,]]~~ to thereby enabling enable one-to-one communication.

11. (Canceled)

12. (Currently Amended) The method of claim 10, ~~wherein executing the call pick-up further comprises~~ further comprising:

allowing telephones of the ringed subscribers to continue to ring so that another call pick-up subscriber can pick up the call, when the call pick-up subscriber sends ~~[[the]]~~ a code for giving up the call pick-up; and

waiting for receipt of the call pick-up feature code from the other call pick-up subscriber.

13. (Currently Amended) The method of claim 10, ~~wherein executing the call pick-up further comprises~~ further comprising:

checking whether there are other ringed subscribers in the same call pick-up group;

transmitting a caller information request message to the ~~relevant~~ other ringed subscribers; and

receiving ~~[[the]]~~ caller information from the other ringed subscribers by ~~analyzing the received information~~ and updating the caller information table.

14. (New) The system of claim 1, further comprising:

a call process common circuit which allows telephones of the ringed subscribers to continue to ring so that another call pick-up subscriber can pick up the call.

15. (New) The system of claim 14, wherein the call process common circuit allows the telephones to continue to ring when the digit analysis circuit receives a code for giving up the call pick-up from the call pick-up subscriber.

16. (New) The system of claim 1, wherein the digit analysis circuit determines whether additional dialed digits from the call pick-up subscriber match a unique identifier in the caller information table, and if there is a match at least one of the ringed subscribers is notified of the existence of the call pick-up subscriber for establishing one-to-one communication with a caller.

17. (New) The system of claim 1, wherein the display control circuit displays the information from the caller information table on a liquid crystal display or light emitting diode of the telephone of the call pick-up subscriber.

18. (New) The system of claim 1, wherein the callers identified in the caller information table correspond to one or more of the ringed subscribers.

19. (New) A method for performing a call pick-up operation, comprising:
receiving a call to subscribers of a same call pick-up group;
receiving a call pick-up feature code from a call pick-up subscriber in response to said call;
validating the call pick-up feature code;
performing a ring subscriber search to determine states of telephones of the subscribers;
generating and displaying a caller information table based on the states of the subscriber telephones determined by the search; and
connecting the call to one of the subscribers based on a selection of information in the table by the call pick-up subscriber.

20. (New) The method of claim 19, wherein the search includes:
(a) generating a message requesting caller information,
(b) sending the message to one of the ringed subscribers,

(c) receiving a response message including the caller information from the ringed subscriber,

(d) repeating steps (a)-(c) for remaining ones of the ringed subscribers, and

(e) generating the caller information table based on the caller information obtained from the ringed subscribers.

21. (New) The method of claim 20, wherein the caller information includes telephone numbers of the ringed subscribers.

22. (New) The method of claim 20, wherein the caller information includes names of the ringed subscribers.

23. (New) The method of claim 20, wherein connecting the call includes:
receiving information from the call pick-up subscriber selecting one of the ringed subscribers identified in the caller information table;

notifying the selected subscriber of the existence of the selection made by the call pick-up subscriber;

receiving a response from the selected subscriber and connecting the call.

24. (New) The method of claim 23, wherein receiving information includes:
receiving digits from the call pick-up subscriber corresponding to a unique ID in the caller information table.